

## PROGRAMME FOR ILLUMINATION II

January 7

### BASIC LIGHTING DESIGN

Review of lighting terms—lumen method—inter-flectance method—source distribution—basic brightness and illumination consideration.

LECTURER: Miss M. C. Currie.

January 14

### BASIC LIGHTING DESIGN PROBLEMS

Student solution of problems involving basic lighting design principles.

LECTURER: Miss M. C. Currie.

January 21

### WIRING

Electrical code—methods of wiring—distribution systems—conductors, circuits and their calculation—economics of wiring—design procedure—specifications.

Lecturer: Mr. J. Ghisvin.

January 28

### WIRING PROBLEMS

Student solution of wiring problems.

LECTURER: Mr. J. Ghisvin.

February 4

### LIGHTING ECONOMICS

Methods of cost analysis—economic factors affecting lighting design—effect of lighting systems on other services.

LECTURER: Mr. Bruce Quan.

February 11

### ARCHITECTURAL CO-ORDINATION

Illumination as an architectural feature.

Lecturer: To be announced.

February 18

### DAYLIGHT DESIGN PRINCIPLES

Variability of daylight—fenestration—sun control.

LECTURER: Mr. H. F. Davidson.

February 25

### BRIGHTNESS AND CLARE

Consideration of source brightness, contrast and visual comfort in lighting systems.

LECTURER: Mr. C. E. Davidson.

March 4

### PROBLEMS INVOLVING VISION AT LOW LEVELS OF ILLUMINATION

Vision at low levels of illumination—perception by silhouette and movement—navigation signals, street and safety lighting.

LECTURER: Miss M. C. Currie.

March 11

### LIGHT, COLOUR AND HUMAN BEINGS

LECTURER: To be announced.



UNIVERSITY OF TORONTO  
UNIVERSITY EXTENSION  
Spring Term 1959

COURSES IN  
ILLUMINATION I  
and  
ILLUMINATION II

OFFERED IN CO-OPERATION WITH THE  
TORONTO SECTION  
ILLUMINATING ENGINEERING SOCIETY

P80 - 0220  
(72)

## ILLUMINATION I & II

Offered in co-operation with the Toronto Section of the Illuminating Engineering Society, these courses are designed to provide essential theory (Illumination I) and the fundamental background necessary for all types of lighting design (Illumination II).

Both courses should be of interest to Consulting Engineers and Architects, lighting fixture designers, and manufacturer, contractor and distributor engineers and salesmen, specializing in lighting. Both courses are intended for people who are directly concerned with illumination design in their day to day work.

The material contained in Illumination I should be regarded as necessary background for students enrolling in Illumination II. There are no fixed entrance requirements but those wishing to take Illumination II would be well advised to take Illumination I this year and Illumination II next year, unless they feel they have covered the essential theory in previous courses or through practical experience.

Because of the emphasis placed on open discussion, enrollment in both courses is limited to 40.

Each course will consist of ten lectures.

### COURSE DIRECTOR:

Miss M. C. Currie, B.A.Sc., P.Eng.,  
Department of Applied Physics,  
University of Toronto.

### COMMITTEE MEMBERS:

N. W. Bethune—Chairman,  
C & M Products Ltd.  
Bruce Quan,  
Quan, Carruthers, King & Quan.  
Derwent Lewis,  
Canadian General Electric.  
Miss M. C. Currie,  
University of Toronto.

## ILLUMINATION I

PLACE: Room 25, Engineering Building.

TIME: 7.30 p.m., Tuesdays, beginning January 6.

FEE: \$15.00.

## ILLUMINATION II

PLACE: Room 25, Engineering Building.

TIME: 7.30 p.m., Wednesdays, beginning January 7.

FEE: \$15.00.

### REGISTRATION

By mail or person at Room 207, 65 St. George Street, 9 a.m. to 5 p.m. daily except Saturdays. Application forms may be obtained by writing The Director, University Extension, 65 St. George Street, or by telephoning Walnut 3-6611, locals 301 and 304.

## PROGRAMME FOR ILLUMINATION I

### January 6

#### NATURE AND PRODUCTION OF LIGHT

The nature of light—the electro-magnetic spectrum  
—the production of light—spectral distribution—the  
visibility function—colour-luminous flux.

LECTURER: Miss M. C. Currie.

### January 13

#### VISION—THE EYE

The structure of the eye—mechanism of perception  
—fixation—adaptation—contrast sensitivity—visual  
acuity—persistence of vision—fatigue and after-  
images—vision at low brightness.

LECTURER: Dr. J. G. Ogilvie.

### January 20

#### VISION—THE TASK

Size—time—brightness—brightness contrast—colour  
contrast.

LECTURER: Dr. J. G. Ogilvie.

### January 27

#### LIGHTING TERMS AND LAWS OF ILLUMINATION

Photometric quantities—Lambert's law—polar distribution.

LECTURER: Mr. G. E. Davidson.

### February 3

#### MEASUREMENTS

Visual photometers. Physical photometers.

Lecturer: Mr. G. E. Davidson.

### February 10 and February 17

#### FLUX, ILLUMINATION & BRIGHTNESS CALCULATION

Theoretical source distribution—total flux—polar  
diagram—Isocandle—isophot—illumination protractor  
—point by point method.

LECTURER: Professor V. L. Henderson.

### February 24

#### CONTROL OF LIGHT

Reflection, specular and diffused—absorption and  
transmission—refraction.

Lecturer: Mr. A. Birkhoff.

### March 3

#### ILLUMINATION FOR SEEING—QUANTITY & QUALITY

Quantity: illumination versus task.

Quality: glare, colour modelling, shadows.

Lecturer: Mr. H. F. Davidson.

### March 10

#### SOURCE CHARACTERISTICS

Spectral distribution, control & characteristics of:

Tungsten filament lamps

Electric discharge lamps

Fluorescent lamps.

LECTURER: Mr. H. C. Jones.